

Claims

1. A docking system for docking a test head of a device tester to a device handler, said docking system comprising:

5 a handler plate, mountable to said device handler and comprising at least one conversion bar, each of said at least one conversion bar comprising at least one lateral protrusion;

and

10 a tester plate, mountable to said test head and comprising at least one slot mount, each of said at least one slot mount having an escalating slot, said escalating slot being laterally oriented for respective linear engagement with said at least one lateral protrusion for said docking.

15 2. The docking system as claimed in Claim 1, wherein said escalating slot comprises a tapered section and a docking section.

20 3. The docking system as claimed in Claim 2, wherein said tapered section comprises a linear sloping edge and a linear non-sloping edge, said linear non-sloping edge being linearly aligned with a linear docking edge of said docking section.

4. The docking system as claimed in Claim 3, wherein said escalating slot comprises an unbounded perimeter portion.

25 5. The docking system as claimed in Claim 4, wherein said tapered section further comprises a connecting portion for enabling substantially linear movement of said at least one lateral protrusion from said unbounded perimeter portion to said linear non-sloping edge.

6. The docking system as claimed in Claim 1, wherein said tester plate further comprises a cam assembly, coupled to said at least one slot mount, for enabling said respective linear engagement when actuated.

5 7. The docking system as claimed in Claim 6, wherein said cam assembly comprises at least one actuating cam.

8. The docking system as claimed in Claim 6, wherein said cam assembly comprises at least one coupling rod.

10 9. The docking system as claimed in Claim 6, wherein said cam assembly comprises at least one interconnecting cam.

15 10. The docking system as claimed in Claim 1, wherein said tester plate further comprises at least one linear guide, said at least one slot mount being respectively coupled with said at least one linear guide.

11. The docking system as claimed in Claim 1, wherein each of said at least one conversion bar further comprises at least one reference locating pin.

20 12. The docking system as claimed in Claim 1, wherein each of said at least one conversion bar further comprises at least one adjustable screw spacer.

13. The docking system as claimed in Claim 1, and further comprising at least one pre-docking guide pin, mountable to at least one predetermined guide pin position of said handler plate.

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14. A docking system for docking a test head of a device tester to a device handler, said docking system comprising:

- a handler plate;
- a tester plate;
- 5 and
- a coupling assembly for enabling said docking, said coupling assembly being associated with said handler plate and said tester plate and comprising:
 - 10 at least one conversion bar, each of said at least one conversion bar comprising at least one lateral protrusion;
 - 15 at least one slot mount, each of said at least one slot mount having an escalating slot, said escalating slot being laterally oriented for respective linear engagement with said at least one lateral protrusion; and
 - a cam assembly, coupled to said at least one slot mount, for enabling said respective linear engagement when actuated.

15. The docking system as claimed in Claim 14, wherein said escalating slot comprises a tapered section and a docking section.

20 16. The docking system as claimed in Claim 15, wherein said tapered section comprises a linear sloping edge and a linear non-sloping edge, said linear non-sloping edge being linearly aligned with a linear docking edge of said docking section.

25 17. The docking system as claimed in Claim 16, wherein said escalating slot comprises an unbounded perimeter portion.

18. The docking system as claimed in Claim 17, wherein said tapered section further comprises a connecting portion for enabling substantially linear movement of said at least one lateral protrusion from said unbounded perimeter portion to said linear non-sloping edge.

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19. The docking system as claimed in Claim 14, wherein said cam assembly comprises at least one actuating cam.

5 20. The docking system as claimed in Claim 14, wherein said cam assembly comprises at least one coupling rod.

21. The docking system as claimed in Claim 14, wherein said cam assembly comprises at least one interconnecting cam.

10 22. The docking system as claimed in Claim 14, wherein said tester plate further comprises at least one linear guide, said at least one slot mount being respectively coupled with said at least one linear guide.

15 23. The docking system as claimed in Claim 14, wherein each of said at least one conversion bar further comprises at least one reference locating pin.

24. The docking system as claimed in Claim 14, wherein each of said at least one conversion bar further comprises at least one adjustable screw spacer.

20 25. The docking system as claimed in Claim 14, and further comprising at least one pre-docking guide pin, mountable to at least one predetermined guide pin position of said handler plate.

26. In an automated testing system, a method for docking a handler plate to a tester plate, said tester plate being coupled to a test head of a device tester, said handler plate being coupled to a device handler, said method comprising the steps of:

5 aligning said handler plate to said tester plate using at least one pre-docking guide pin, said at least one pre-docking guide pin being mountable to said handler plate and respectively engageable with at least one pin socket, said at least one pin socket being associated with said tester plate;

10 and

10 actuating at least one actuating cam associated with said tester plate to thereby enable respective linear engagement of at least one escalating slot of said tester plate with at least one lateral protrusion for said docking, said at least one lateral protrusion being associated with each of at least one conversion bar, said at least one conversion bar being mounted to said

15 handler plate.

20 27. The method as claimed in Claim 26, wherein said aligning step comprises the step of positioning, respectively, each of said at least one lateral protrusion at an unbounded perimeter portion of each of said at least one escalating slot.

28. The method as claimed in Claim 26, and further comprising the step of locking said at least one actuating cam in a locking position.

25 29. The method as claimed in Claim 28, and further comprising the step of unlocking said at least one actuating cam from said locking position.

30. The method as claimed in Claim 29, wherein said unlocking step comprises the step of moving a latch handle to thereby release a retaining clip.